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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,718	12/28/2001	Thomas P. Sawyers	1662-55400 JMH (P01-3884)	2121
23505	7590	09/08/2004	EXAMINER	
CONLEY ROSE, P.C. P. O. BOX 3267 HOUSTON, TX 77253-3267			FLEMING, FRITZ M	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/034,718	Applicant(s) SAWYERS ET AL.	
	Examiner Fritz M Fleming	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

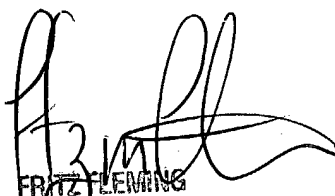
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.


FRITZ FLEMING
PRIMARY EXAMINER
GROUP 2100

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/07/2003</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claim 3,10 transformer and the feedback signal provided to the transformer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

Art Unit: 2182

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5,6,8-10,12,13 are rejected under 35 U.S.C. 102(b) as being anticipated by Narita et al. (Narita).

Anticipation is provided by the following:

- Claim 1 shows a computer system in the form of an electronic device 30, which is a battery operable computer (col. 3, lines 45-55). Being such, a CPU has to positively be there, as a CPU is inherent to having a computer. A battery subsystem is shown at 40. An AC adapter is shown at 20, coupled to the computer and its CPU at 30 and the battery at 40, with regulation in Figure 3, such that the voltage is regulated at Region A (Equality 5) until a current threshold is reached at Regions E and B (Equalities 3 and 1), representing a current threshold above which power is regulated to an approximate constant

value. See column 8, line 54+ which discusses Region A as being constant voltage control, Region B as being nearly constant power control, Region C as being constant current control, Region D as being constant current control, and Region E as being nearly constant power control. The term “nearly” anticipates the claimed “approximately”.

- Claim 2 is shown by the Figure 3 graph showing that the output voltage $V(O)$ is reduced for increasing Output Current $I(O)$ in Regions E and B.
- Claim 3 is referenced to Figure 1 and the transformer 106, in which the feedback output section 400 operates the photocoupler 130 to provide a feedback signal to the transformer via PWM 108 so as to operate in the constant power (i.e. reduced output voltage per Figure 3) and column 5, lines 33-45 and column 6, lines 16-27, which specifically mention a predetermined output current value triggering the nearly constant power output. A voltage feedback circuit is seen at 400.
- Claim 5 is shown by the discussion of claim 1, with means contained within 400 and 108 to provide power regulation when a current value is above a value for the AC and voltage regulation for the AC adaptor 20.
- Claim 6 is shown in Figure 3.
- Claim 8 is shown by the AC adaptor 20 of Figure 1 and the output voltage regulator and power regulator of 400.
- Claim 9 is shown by Figure 3.
- Claim 10 is discussed per the claim 3 details.

Art Unit: 2182

- Claim 12 is shown by the AC adaptor 20 of Figure 1 with the means in 400.
- Claim 13 is in 400 with operations shown in Figure 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 4,7,11,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita.

Narita has been shown to anticipate a large portion of the subject matter, but does not expressly state that the response to current changes is slower than the response to voltage changes. However, such is rendered obvious by the choice of the components used and an analysis of the graph of Figure 3. First of all, a "response" can be judged as to the properties of the amplifiers 120 and 140, where 120 responds to current changes and 140 responds to voltage changes. Thus the response properties of the amplifiers dictates the response speed, and hence it is a mere choice of parts as to which one, if any, one would want to respond more quickly. Secondly, an analysis of Figure 3, the various regions come about due to the various feedback paths involved in the respective regions. As the feedback paths dictate the speed at which the circuit 400 responds, it is again a matter of circuit design as to which would respond first. Hence, the examiner deems that the response speed to current and voltage changes is a matter of the design of the circuit, and is obvious subject matter fairly taught by overall consideration of the Narita reference.

9. Claims 15-16,19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita in view of the admitted prior art.

Narita lacks the throttling back of a load in response to a detected reduction in voltage, noting that a reduction of output voltage is detected in normal operations in Regions B-E by normal operations in Figure 3.

Art Unit: 2182

The admitted prior art sets forth a current sense at 18, which detects an area in which the adapter cannot keep up with the demands, and thus causes a throttling back of the battery charging.

Thus it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify Narita per the teachings of the admitted prior art, so as to allow for a throttling back of battery charging during times in which the load on the AC adaptor increases to the point in which power consumption is high. Clearly, the admitted prior art applied to Narita teaches that throttling should occur in Regions B-E, as these regions are where the battery is charged under load conditions. Thus one would have been motivated to include the teachings of the admitted prior art (i.e. the battery charging throttling) for the purpose of improving operations of Narita by throttling the battery charging in regions of constant power regulation, so as to avoid exceeding the output capability of the AC adaptor. Note a computer has many loads, as required by the claim preamble.

10. Claims 17,18,21,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita in view of the admitted prior art as applied to claim 15,16,19,20 above, and further in view of Inoue.

Narita in view of the admitted prior art lack the throttling to be a reduction in processor frequency or display brightness.

Inoue teaches a power management scheme that involves either the reduction of LCD brightness or CPU frequency in order to not exceed the capacity of the battery (see columns 7 and 8).

Art Unit: 2182

Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify Narita by the teachings of Inoue for the purpose of not exceeding the capacity of the battery by throttling the CPU frequency or brightness of the LCD. The motivation to do so is again to prevent exceeding the power capacity of the AC adaptor, so in regions B-E where constant power is regulated in parts thereof, the capacity of the adaptor is being approached, and load throttling of the CPU frequency or LCD brightness will ensure that the capacity is not exceeded.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Atkinson shows throttling. Kouichirou teaches an AC adaptor and brightness control. Suzuki et al. teach a power supply. Nakanishi teaches feedback control. Application Notes shows constant power control in Figure 11.

12. Claims 15-22 are objected to because of the following informalities: Claims 15 and 19 recite "concerts" which should be "converts". Appropriate correction is required.

13. The disclosure is objected to because of the following informalities: It seems as though the [0036] (referenced to 2003/0126474) references to 140 and 142 are reversed compared to Vout and Iout.


Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 703-308-1483. The examiner can normally be reached on M-F, 0600-1500.

Art Unit: 2182

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Fritz M. Fleming
Primary Examiner
Art Unit 2182

fmf